

### **REMARKS**

Reconsideration and allowance in view of the foregoing amendment and the following remarks are respectfully requested. Claims 1, 9, 12 and 13 are amended without prejudice or disclaimer.

#### **Objection to Specification**

Applicant has made the appropriate amendment on page 4 of the specification to reference a "dialog manager" as the "(DM)". Accordingly, Applicant requests withdrawal of the objection.

#### **Objection to Claims 9, 12 and 13**

The Office Action objects claims 9, 12 and 13 because of informalities. Applicant has amended the claims according to the respective identified informality. Accordingly, Applicant respectfully requests withdrawal of the objects to claims 9, 12 and 13.

#### **Rejection of Claims 1 and 12-20 Under 35 U.S.C. §102(b)**

The Office Action rejects claims 1 and 12-20 under 35 U.S.C. §102(b) as being anticipated by Gergic et al. (U.S. Publication No. 2002/0198719) ("Gergic et al."). Applicant traverses this rejection and argues that Gergic et al. fail to teach the limitation of a top level flow controller. However, to further distinguish this feature from the reference, Applicant has amended claim 1 to recite selecting a top level flow controller that is a finite state model. Support for this limitation is found in the specification on page 8, paragraph [0029]. Applicant notes that with respect to the top level flow controller, the Office Action cites Gergic et al.'s paragraphs [0017], [0021] and claim 1 as teaching this feature. It is apparent that the Office Action concludes that the VoiceXML document which includes code for invoking a reusable VoiceXML dialog component and code for configuring the reusable VoiceXML dialog

component using an associated parameter object, is the equivalent of the top level flow controller. Applicant traverses this conclusion.

As is taught in paragraph [0021], the client side reusable dialog component framework is built within the VoiceXML specifications and utilizes <sub-dialog> elements to call reusable VoiceXML dialog components and associated ECMAScript parameter objects to pass parameters, configuration and results. This information is then interpreted on the client side or the VoiceXML browser. Applicant simply submits that the difference between the VoiceXML document and the recited top level flow controller that is a finite state model represents a novel and non-obvious limitation within claim 1 that is not taught in Gergic et al. There is no hint or suggestion that the VoiceXML document disclosed in Gergic et al. is a finite state model or functions in an equivalent manner as a finite state model. One of skill in the art would certainly recognize the difference between a VoiceXML document and a finite state model. VoiceXML documents function essentially more like an HTML document does with regard to web pages, see Gergic et al. paragraph [0069]. Inasmuch as one of skill in the art would easily recognize and not confuse the VoiceXML disclosed in Gergic et al. with a top level flow controller that is a finite state model, Applicant respectfully submits that claim 1 is patentable and in condition for allowance.

Applicant also does not acquiesce to the contention on page 4 of the Office Action the act of testing and deploying the system for use is simply a known standard for the development of any invention and is considered an inherent part of the method. This is because there are other limitations within the testing and deployment step that the Examiner fails to even mention. For example, the testing and deploying step requires the top level flow controller (that is a finite state model), the reusable sub-dialogs and developed sub-dialogs to interact independent of their decision model. The Office Action is devoid of any analysis of this particular limitation within

the step of testing and deploying the spoken dialog service. Accordingly, Applicant traverses the conclusion in the Office Action that this particular method of testing and deploying the spoken dialog service is simply an inherent part of the method. Furthermore, Applicant notes that paragraphs [0132]-[0133], which are cited as disclosing the testing and deploying steps, fail to teach anything regarding a top level controller that is a finite state model, reusable sub-dialogs and developed sub-dialogs interacting independent of their decision model. For example, this portion of the reference fails to teach anything regarding developed sub-dialogs or anything regarding these various components interacting independent of their decision model.

Accordingly, for at least these several reasons, Applicant respectfully submits that they have presented easily sufficient evidence indicating that Gergic et al. fail to teach or suggest each limitation of claim 1.

Regarding claim 13, Applicant has amended claim 13 in a manner similar to claim 1. Accordingly, Applicant respectfully reasserts that the top level dialog flow controller that is a finite state machine of claim 13 is not taught or suggested in Gergic et al. Applicant further submits that Gergic et al. fail to teach incorporating a context shift component and the functionality of a context shift component in the testing and deploying state. The Office Action asserts that the step of a context shift component causing a parent dialog of the sub-dialog to be set to a state described by the context shift would include the condition of the parent dialog be able to discriminate which set of parallel processes is applicable as input as is taught in paragraphs [0133]-[01380]. Applicant submits that this portion of the reference merely teaches providing input and returning results from sub-dialogs and fundamentally fails to teach the concept of a parent dialog of a sub-dialog. Paragraphs 124 and 125 of Gergic et al., cited in the Office Action, merely discuss form level grammars and how fields associated with filling in forms may be filled in in any order and how multiple grammars may be active to allow a user to

fill in multiple forms “only within a document”. It is actually noted in paragraph [0125] that the mechanism does not provide for mixed initiatives across documents and nor does it provide a mechanism for exiting form items that have their own execution flow before completion of the dialog flow. Applicant submits that when the fundamental limitations that are cited in claim 13 are properly analyzed in view of the use of form level grammars and on page 24 and the concepts of passing objects or data back and forth between a sub-dialog as is taught on page 25, that these simply fail to teach each particular limitation of claim 13. Accordingly, for these several reasons, Applicant respectfully submits that claim 13 is patentable and in condition for allowance.

Applicant also submits that the dependent claims 2-12 and 14-20 are patentable and in condition for allowance inasmuch as they depend from a parent claim and recite further limitations therefrom.

**Rejection of Claims 2-6 Under 35 U.S.C. §103(a)**

The Office Action rejects claims 2-6 under 35 U.S.C. §103(a) as being unpatentable over Gergic et al. in view of Abella et al. (U.S. Publication No. 2003/0105634) (“Abella et al.”). Applicant respectfully traverses this rejection and submit that one of skill in the art would not by a preponderance of the evidence have sufficient motivation or suggestion to combine these references.

To establish a *prima facie* case of obviousness, the Examiner must meet three criteria. First, there must be some motivation or suggestion, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to combine the references. Second, there must be a reasonable expectation of success, and finally, the prior art references must teach or suggest all the claim limitations. The Examiner bears the initial burden of

providing some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." MPEP 2142.

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). MPEP 2143.01.

Furthermore, if the examiner determines there is factual support for rejecting the claimed invention under 35 U.S.C. 103, the examiner must then consider any evidence supporting the patentability of the claimed invention, such as any evidence in the specification or any other evidence submitted by the applicant. The ultimate determination of patentability is based on the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The legal standard of "a preponderance of evidence" requires the evidence to be more convincing than the evidence which is offered in opposition to it. With regard to rejections under 35 U.S.C. 103, the examiner must provide evidence which as a whole shows that the legal determination sought to be proved (i.e., the reference teachings establish a *prima facie* case of obviousness) is more probable than not. MPEP 2142.

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they are in analogous arts. Where the teachings of two or more prior art references conflict, the examiner must weigh the power of each reference to suggest solutions to

one of ordinary skill in the art, considering the degree to which one reference might accurately discredit another. *In re Young*, 927 F.2d 588, 18 USPQ2d 1089 (Fed. Cir. 1991). MPEP 2143.01.

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

The Office Action appropriately concedes that Gergic et al. fail to teach the limitation, for example, of claim 2 regarding selecting sub-dialogs from a group comprising telephone number, social security number, account number, address, e-mail address and name. The Office Action asserts that these references are combinable because both teach method and apparatus for spoken dialog management. They say that motivation is “inherent” because Abella et al. provides exemplary usage that is applicable to the teachings of Gergic et al. The Office Action further asserts that Abella et al. provides the motivation to combine “disclosing specific sub-dialogs that are useful as components of reusable dialog systems.” Applicant respectfully traverses this analysis and note that one of skill in the art would easily recognize that there are substantial differences in the fundamental operation of using VoiceXML and the use of spoken dialog systems that include ASR, SLU, and DM components. See Abella et al., paragraph [0004]. Applicant further submits that Alisha Abella and Allen Gorin are well known in the art as researchers and experts in using non-VoiceXML spoken dialog systems. It is clear that Gergic et al. focus entirely on reusable VoiceXML dialog components. Applicant respectfully submits that one of skill in the art would not be motivated to combine VoiceXML dialog components with the finite state machine (FSM) based approach in Abella et al. For example, Abella et al. primarily focus on the task and operation of the dialog manager. Applicant simply asserts that the spoken dialog system and dialog management approach taught by Abella et al. would be well understood by one of skill in the art as not easily combinable or desirable to combine with the strict approach

that is required when using the voice extensible mark-up language of VoiceXML. These are entirely different solutions and entirely different fields of study in speech processing.

Accordingly, Applicant submits that in reality, one of skill in the art would certainly not find it "inherent" to combine these teachings.

Applicant also traverses the comment on page 10 of the Office Action that the term "dialog motivator" in Abella et al. is synonymous with the use of the term "sub-dialog". Paragraph [0039] of Abella et al. teach that their system implements "the dialog motivators as rules that act on instances of task knowledge during the spoken dialog." This more general application of implementing rules would be understood by those of skill in the art as different from implementing a particular sub-dialog. Accordingly, Applicant respectfully submits that claims 2-6 are patentable and in condition for allowance.

**Rejection of Claims 7-11 Under 35 U.S.C. §103(a)**

The Office Action rejects claims 7-11 under 35 U.S.C. §103(a) as being unpatentable over Gergic et al. in view of Brown et al. (U.S. Patent No. 5,699,456) ("Brown et al."). Applicant respectfully traverses this rejection and submits that it would not be obvious of one of skill in the art to blend the teachings of Gergic et al. and Brown et al.

Applicant respectfully submits that one of skill in the art would not have sufficient motivation or suggestion, by a preponderance of the evidence to combine Brown et al. with Gergic et al. The Office Action on page 12 asserts that it would be obvious of one of skill in the art to combine the teachings of Gergic et al. with the teachings of Brown et al. in order to implement a spoken dialog management system with a smaller minimum grammar size for the purpose of reducing data storage requirements. Applicant submits that this is an incorrect and unlikely motivation inasmuch as Gergic et al. fail to use grammars. As one of skill in the art

would certainly understand, Brown et al. teach a system that requires speech recognition grammars, Hidden Markov Models and so forth in the context of developing a speech recognition system. In this regard, Brown et al. is more akin to Abella et al. in being a non-VoiceXML approach to spoken dialog systems. As one of skill in the art would readily identify, rather than using the grammars of Brown et al., Gergic et al. use the more structured and programmed VoiceXML mark-up language, which has been noted above as more like HTML for web-pages. This structured approach differs fundamentally from the approach of Brown et al. and accordingly, Applicant respectfully submits that, by a preponderance of the evidence, one of skill in the art would not have sufficient motivation or suggestion to combine these references.

Applicant respectfully also reminds the Examiner that the preponderance of the evidence standard only requires slightly more evidence in the Applicant's favor than is in the Examiner's favor. In this regard, it is certainly a standard that is relatively easy for Applicants to meet. Accordingly, Applicant submits that claims 7-11 are patentable and in condition for allowance.



**CONCLUSION**

Having addressed all rejections and objections, Applicants respectfully submit that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited. If necessary, the Commissioner for Patents is authorized to charge or credit the **Novak, Druce & Quigg, LLP, Account No. 14-1437** for any deficiency or overpayment.

Respectfully submitted,

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By: \_\_\_\_\_

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